EXHIBIT 16

Filed Under Seal

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1	UNITED STATES DISTRICT COURT	'
2	DISTRICT OF MINNESOTA	
3	Case No. 0:18-cv-01776-JRT-HB	
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7	IN RE PORK ANTITRUST LITIGATION	
8	This Document Relates to: All Actions	
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13		
14	HIGHLY CONFIDENTIAL	
15	REMOTE TESTIMONY OF DR. RUSSELL MANGUM	
16	JULY 13, 2022 - 9:00 A.M. PDT	
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21		
22		
23		
24	JOB NO. 2022-850362	
25		

		109
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	.00
2	affiliated, meaning they have no business	
3	relationship or interaction with them	
4	ever?	
5	Q You agree, Dr. Mangum, that	
6	there are independent hog growers who sell	
7	hogs to the defendants that the defendants	
8	and alleged co-conspirators this case do	
9	not own, right?	
LO	A Oh, oh, yes. I talk about	
11	that in my report.	
12	In other words, I could only	
13	say no to that if I thought that the	
L4	packer market was 100 percent vertically	
15	integrated, which clearly it's not, as I	
L6	talk about in my report. There are	
L7	independent growers.	
18	Q And many of the defendants	
L9	and alleged co-conspirators this case are	
20	not anywhere near a hundred percent	
21	vertically integrated, right?	
22	MR. POUYA: Objection to form.	
23	Vague. Lacks foundation.	
24	THE WITNESS: I don't believe	
25	that the defendants which are	

		110
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	packers and sell things in the pork	
3	market, <mark>I don't think any of them</mark>	
4	are close to a hundred percent	
5	vertically integrated in the formal	
6	sense they own and sell just for	
7	themselves. No, I don't think	
8	there's any one close to	
9	100 percent.	
10	BY MR. REISER:	
11	Q Some of them are close to a	
12	hundred percent in terms of buying hogs	
13	from somebody other than their company,	
14	right?	
15	A I think so. But it gets	
16	back, you know, to the questions you were	
17	asking me about percentages for certain	
18	entities, and if I would be surprised that	
19	number is for Hormel and Tyson, and I just	
20	don't have those numbers.	
21	But I do know that, as I	
22	describe in my report, there are packers	
23	that are much more heavily vertically	
24	integrated and some that are not very	
25	vertically integrated at all formally	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	by the idea of, you know, owning, raising	
3	for themselves, and then basically	
4	internally supplying the hogs for	
5	themselves when they, you know, make	
6	things to sell in the pork market.	
7	Q Do the independent hog	
8	growers who sell hogs to the defendants	
9	that they otherwise don't own, sell to	
10	just one defendant?	
11	MR. POUYA: Objection to form.	
12	Vague. Foundation. Compound.	
13	THE WITNESS: There can be	
14	practices where you might say for a	
15	period of time it could be that a	
16	relationship might look like,	
17	this farmer, this grower, really	
18	mainly works with that defendant,	
19	but there is a lot of swapping. I	
20	would not generally say that we get	
21	these direct match ups that kind of	
22	retain for long time. But it	
23	depends on the practices.	
24	As I mentioned in my report,	
25	you have got location issues about	

25

they add someone else, retaining the

		113
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	110
2	original purchaser or maybe they make a	
3	switch. I think that's all I meant. I	
4	don't remember where I used that in my	
5	past answer.	
6	Q You mentioned the Maschhoffs	
7	earlier, do you remember mentioning that	
8	company?	
9	A Yeah, I remember it was an	
10	answer to a question about growers, right?	
11	who are the entities, the larger	
12	growers that raise hogs and sell the hogs	
13	you call market hogs.	
14	Q And the Maschhoffs is one of	
15	the larger entities that sells and raise	
16	hogs; is that right?	
17	A I do think of them as a	
18	prominent entity. I don't remember the	
19	relative sizes. I haven't memorized, that	
20	as far if I hear I was saying	
21	"Maschhoff," so I am obviously missing a	
22	consonant in there, if you're better	
23	informed than I am.	
24	But I do know they show up in	
25	documents and in the hog growing industry	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	at 11:16 a.m. and Testimony	
3	Recommenced at 11:32 a.m. PDT.)	
4	THE VIDEOGRAPHER: The time is	
5	11:32 a.m. We are now back on the	
6	record.	
7	BY MR. REISER:	
8	Q Welcome back, Dr. Magnum.	
9	Did you discuss the substance	
10	of your testimony with anyone during the	
11	break?	
12	A I did not.	
13	Q You're opining in this case	
14	that there was a conspiracy to reduce the	
15	supply of pork, correct?	
16	MR. POUYA: Objection to form.	
17	THE WITNESS: I don't have any	
18	legal opinions and I don't have the	
19	opinion that there was a conspiracy	
20	or violation of Sherman Act, for	
21	example.	
22	My opinions are stated in my	
23	expert report but I don't have that	
24	liability opinion.	
25	BY MR. REISER:	

the effects of that.

25

I believe my

		236
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	which exports were increased	
3	relative to a competitive volume	
4	that I rely on for the opinions I	
5	have expressed in my report.	
6	BY MR. REISER:	
7	Q I take it, then, you are not	
8	opining for purposes of your current	
9	report, Mangum Exhibit 1, what exports	
10	would have been, if not for the alleged	
11	conspiracy, right?	
12	MR. POUYA: Objection.	
13	Foundation.	
14	THE WITNESS: Yes. If your	
15	word means "what" means a quantity.	
16	Like I said, I don't have an	
17	analysis that resulted in a	
18	quantity of but-for pork exports	
19	that I am relying on for the	
20	purposes of my expert report at	
21	this point.	
22	BY MR. REISER:	
23	Q At this point, are you	
24	opining that every export of pork from	
25	2009 to 2018 was part of an	

	gy Commontain	July 10, 2022
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	237
2	anti-competitive conspiracy to increase	
3	the price of pork in the United States?	
4	A No.	
5	Q As part of your analysis in	
6	this case, did you consider the economic	
7	climate for hog production leading up to	
8	2009?	
9	MR. POUYA: Objection, form.	
10	Foundation.	
11	THE WITNESS: I do talk about	
12	the industry before 2009. I talk	
13	about historical trends, you know.	
14	There are sections in my report	
15	that talk about it. And I did	
16	study that industry to inform me	
17	about at least the elements that I	
18	included in my report.	
19	BY MR. REISER:	
20	Q What is your understanding of	
21	what plaintiffs alleged a conspiracy	
22	period in this case to be?	
23	A It's my understanding that,	
24	as I describe in my report, the conspiracy	
25	period goes from January in 2009 and it	

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 1
     DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
 2
         making hogs flowing through the
 3
                It's the opposite of what
 4
         you said.
 5
                I have included variables that
 6
         I think capture that in my
 7
         analysis.
 8
      BY MR. REISER:
 9
                   Did you control for
10
      circovirus specifically in your model?
11
                   I did not.
12
            0
                   Why not?
                   I don't believe that it needs
13
            Α
14
      its own separate controlling for that
15
      virus in my model.
16
            0
                   And why not?
17
                   You know, I think you have
      got a theory you think it does. But I am
18
      not going to -- if I don't believe
19
20
      something, you asking why not, right? --
2.1
      isn't something I am going to answer.
22
      Because I don't know where you are going.
23
                   I think you have a theory and
24
      evidence to come to a conclusion.
                                           I think
25
      you're somehow wanting me to engage and
```

		2/2
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	outline that and come to a conclusion.	
3	But you asked if I did something and I	
4	didn't. I think I got the proper	
5	variables, but I can't answer a why not	
6	question. And I don't know what it means	
7	to do that.	
8	Q I am just trying to	
9	understand what your analysis is and isn't	
10	and I take it from your answer that	
11	circovirus vaccine availability was not	
12	one of the variables you considered but	
13	you're testifying now you didn't believe	
14	and didn't do so.	
15	Did I get anything wrong	
16	there?	
17	MR. POUYA: Objection.	
18	Misstates the testimony.	
19	THE WITNESS: I don't believe	
20	I need a separate circovirus	
21	variable in my analysis. That part	
22	is correct.	
23	That doesn't mean that I	
24	haven't controlled for things that	
25	effect the costs productivity, and	

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 1
     DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
 2
         the raising hog process, all of
 3
                That's not true.
         that.
                                   I have
 4
         control for that but I don't
 5
         believe I need also a separate
         variable for circovirus vaccine
 6
 7
         availability.
 8
      BY MR. REISER:
 9
                  What impact, if any, did the
10
      global financial crises that began in 2008
11
      have on hog growing?
12
               MR. POUYA: Objection.
13
         Foundation.
14
               THE WITNESS: I don't have an
15
         opinion specifically. I have not
         conducted an analysis about the
16
17
         financial crisis and its impact on
         the hog market specifically to form
18
         my opinions.
19
20
               I have control for the
21
         elements which define large
22
         rescissions, great recessions,
         financial crisis, involving demand,
23
         involving what it did to costs.
24
25
         control for that.
                             Right?
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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	But I don't have an analysis	
3	that specifically looks at the hog	
4	market.	
5	BY MR. REISER:	
6	Q Is it fair to say that the	
7	global financial crisis that began in 2008	
8	led to a weaker demand for pork?	
9	MR. POUYA: Objection.	
10	Foundation.	
11	THE WITNESS: Well, the global	
12	financial crisis, part of that	
13	relates to things such as overall	
14	demand, right? GDP, I control	
15	for. Right. I got controls for	
16	price level inflation.	
17	I believe that there's effects	
18	from whether it's within the	
19	context of large swings that were	
20	noticed during the financial crisis	
21	or the Great Recession, before that	
22	there was expansory period, right?	
23	there's a recovery period	
24	afterwards. I control for those	
25	macroeconomic variables in my	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	You are not opining in this	
3	case what how many sows or hogs there	
4	would have been, if not for the alleged	
5	conspiracy, right?	
6	MR. POUYA: Same objection as	
7	before. I will instruct the	
8	witness to testify as to what he's	
9	relied upon for purposes of class	
10	certification.	
11	THE WITNESS: I don't have any	
12	analysis of a but-for number of	
13	hogs that I rely on for my opinions	
13 14	hogs that I rely on for my opinions in this case.	
14	in this case.	
1 4 15	in this case. BY MR. REISER:	
14 15 16	in this case. BY MR. REISER: Q Are you aware that from 2007	
14 15 16 17	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets	
14 15 16 17	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets years for hog growers ever?	
14 15 16 17 18	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets years for hog growers ever? Are you aware of that?	
14 15 16 17 18 19	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets years for hog growers ever? Are you aware of that? MR. POUYA: Objection. Form.	
14 15 16 17 18 19 20	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets years for hog growers ever? Are you aware of that? MR. POUYA: Objection. Form. Foundation.	
14 15 16 17 18 19 20 21	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets years for hog growers ever? Are you aware of that? MR. POUYA: Objection. Form. Foundation. THE WITNESS: I am aware of	
14 15 16 17 18 19 20 21 22	in this case. BY MR. REISER: Q Are you aware that from 2007 to 2009, it was one of the worst markets years for hog growers ever? Are you aware of that? MR. POUYA: Objection. Form. Foundation. THE WITNESS: I am aware of the trends in feed costs, and aware	

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 1
     DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
 2
         tough time for the, generally --
 3
         for the economy, generally.
 4
               So I am also aware that what
 5
         was experienced in the pork
         industry isn't necessarily immune
 6
 7
         or different from many other
         markets, many other -- you know,
 8
 9
         markets and sectors of the economy
10
         generally.
11
      BY MR. REISER:
12
                  Did you consider for purposes
            0
13
      of your analysis in this case that the
14
      pork industry in 2009 was undergoing the
15
      longest and deepest economic losses in
16
      20 years?
17
               MR. POUYA:
                           Objection.
                                         Form.
         Foundation.
18
19
               THE WITNESS:
                              The demand and
20
         the costs and those elements which
         are descriptive of things like
21
22
         recessions, even financial crisis,
23
         those are, yes, all controlled for
24
         in my model -- in my pricing model,
25
         when I evaluated prices in this
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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	high, and they also don't fully	
3	react when costs are dropping.	
4	And so they have got a longer	
5	term growth. And it could be	
6	difficult, but because of the	
7	symmetric nature how that happens,	
8	it's not as straightforward as	
9	putting on blinders and say let's	
LO	just decide about today or last	
11	year and ignore what's been	
L2	experienced.	
13	So you need to know you	
L4	need to know more about the	
15	industry to make a facile	
Lб	conclusion about I see a number	
L7	that must mean A. It could be more	
L8	complicated that that economically.	
L9	BY MR. REISER:	
20	Q And one of the things that is	
21	relevant to the economics of it would be	
22	the fact there are more hogs because a	
23	vaccine that is reducing hog mortality,	
24	right?	
25	MR. POUYA: Objection.	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	course, that could end up with,	
3	Wow, I have way too many hogs	
4	because I didn't have, you know,	
5	nearly as many that let's say died	
6	because of a virus.	
7	The rational thing would be to	
8	automatically adjust, right? if	
9	you find something, it's like when	
LO	you buy a new machine that makes	
11	product twice as many, you wouldn't	
L2	say well, for years I have been	
13	running my machine for certain	
L4	hours a day. Someone will say no,	
15	we can react because something has	
L6	changed what it is going to do is	
L7	decrease our machinery costs per	
L8	unit. So it's reflected in costs,	
L9	right.	
20	But, yeah, it would be	
21	irrational to think statically like	
22	you suggest.	
23	BY MR. REISER:	
24	Q Do you know one way or the	
25	other whether hog growers anticipated the	

		314
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	314
2	question again, I have seen it. Both up	
3	and down but I have seen them.	
4	Q You have seen that they	
5	profited on the margin between the higher	
6	price for pork versus the higher price	
7	they paid for the primary input which is	
8	the hog?	
9	MR. POUYA: Objection.	
10	Foundation.	
11	THE WITNESS: What I have seen	
12	is that prices and costs move	
13	together. Whether costs are	
14	dropping and prices are dropping or	
15	costs are going up and prices are	
16	going up.	
17	That's where I noticed I have	
18	seen that relationship. So there's	
19	a response that when costs go up,	
20	it also means prices tend to go up.	
21	BY MR. REISER:	
22	Q But you haven't seen any	
23	indication in anything you have analyzed	
24	for purposes of your report in this case,	
25	Mangum Exhibit 1, that hog growers	

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 1
     DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
 2
         happened.
 3
               Costs -- costs aren't always
 4
         the same here. They move quite a
 5
         bit, up and down, and we also see
         changes in prices up and down.
 6
 7
      BY MR. REISER:
 8
                  To your knowledge, have
            0
      plaintiffs alleged in this case that
 9
10
      packers were buying hogs at higher prices
11
      so they could re-sell pork at higher
12
      prices?
13
            Α
                  I don't see that as an
14
      allegation.
                   That's the reality of
15
      economics.
                  That's what happens.
16
      People -- it's buy low and sell high.
17
                  Notice no one ever talks
18
      whether there's an increase of those.
19
      It's buy low and sell high. Right?
                                            So it
20
      wouldn't be an allegation that that
2.1
      people, Hm, prices are higher, but they
22
      have been willing to buy anyway because
23
      they believe they can raise prices.
24
                  That wouldn't be an
      allegation, that would be the way markets
25
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_		433
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	small do they make, if at all. They tend	
3	to send these sets, how many medium, how	
4	many small, how many larges. Right.	
5	Just because you say, well, I	
6	only have out of every 50 shirts I send, I	
7	am going to send one or two extra-extra	
8	small, there is not that many people. If	
9	I am wondering about how much do I import	
LO	versus export I might have the same	
11	level of demand in and outside the US, I	
L2	wouldn't use the highly just because it's	
13	small.	
L4	That's what I thought of when	
15	you mentioned this fringe pork products.	
L6	It could be relatively very small, but	
L7	that doesn't necessarily mean that	
18	comparing across countries, we call it	
L9	highly versus not highly in the US versus	
20	the foreign country.	
21	It depends which country.	
22	There are sometimes there's a product that	
23	is desirable more in other products. The	
24	countries that are big that I talk about,	
25	by the way, for exporting, tend to be also	

		434
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	in North America. So we haven't got the	
3	same type of big difference in demands,	
4	than we might have if we have if it's	
5	something like in Asian country. So all	
6	that comes in the mix.	
7	Q China is one of the biggest	
8	exporting withdrawn.	
9	China is one of the big	
LO	countries that imports US pork, right?	
11	A It is a big country	
L2	regardless of what we are talking about	
L3	China is a big country. I know I have a	
L4	table where I talk about the large volumes	
L5	or at least I kind of a graph. Well,	
L6	if we are exporting, where is it going?	
L7	And China is on there. If I recall, there	
L8	were other countries that were bigger at	
L9	least for a large portion of the time	
20	period.	
21	Q Did you consider the fact	
22	that in China, pork hearts, tongue,	
23	stomachs, and entrails are part of their	
24	culinary culture again	
25	(Simultaneous Crosstalk.)	

		700
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	THE WITNESS: I don't do a,	
3	quote/unquote, export analysis like	
4	you described. I didn't set out to	
5	do an analysis to say what would	
6	have been the but-for level of	
7	exports. As I mentioned before, I	
8	don't do that.	
9	What I have pointed out is	
10	statements by the defendants where	
11	they are talking generally about	
12	the US market, and they are saying	
13	what we need to do one thing we	
14	need to do get prices up is,	
15	exports, exports.	
16	They don't say, well, that may	
17	be meaningless, unless we are	
18	talking about tongues the things	
19	I think your question suggest is	
20	they only meant strange products.	
21	That is not borne out with the	
22	documents that I have pointed out	
23	in my report.	
24	BY MR. REISER:	
25	Q But it's fair to say that	

		443
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	So it would be incomplete and	
3	incorrect to say if I have just because	
4	I have an exchange rates, let's say, that	
5	makes a currency, you know, more favorable	
6	in some foreign country to buy US	
7	products. If that doesn't rise to the	
8	level of making the sale in that foreign	
9	country, look, better than keeping it	
10	domestically, then that would be an	
11	irrelevant change in exchange rates.	
12	(Simultaneous Crosstalk.)	
13	So it's got to work to flow	
14	to the value to the people in the US to	
15	make that decision. That's the analysis I	
16	have done. And I wouldn't say that that's	
17	not irrelevant to the exchange rates.	
18	But the only way it would	
19	be the only way it would be relevant is	
20	if exchange rates in some foreign company	
21	changed such that demand for US exports	
22	increased so much that the value of the US	
23	exports to a US producer increased	
24	relative to keeping it domestically. And	
25	that did not happen in the pork industry	

		446
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	as I highlighted.	
3	Q Are you aware that the US	
4	over time in the 2009 to 2018 timeframe	
5	has incentivized exports of agricultural	
6	products?	
7	A Yes, I am aware of that.	
8	Q Including pork?	
9	A Yes.	
10	Q Could the observed increase	
11	in exports of pork products be due to the	
12	facts of that incentives withdrawn.	
13	I am going to ask a coherent	
14	question.	
15	Could the increase in exports	
16	that you observed over time be caused by	
17	the US incentivizing exports of	
18	agricultural products, including pork?	
19	MR. POUYA: Objection.	
20	Foundation. And speculation.	
21	THE WITNESS: Well, incentives	
22	are part of what could affect	
23	demand, one thing. But if the	
24	incentives still don't rise the	
25	value of exporting to be higher	

BY MR. REISER:

25

		460
1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	100
2	don't remember if that's the only	
3	place I would mention contracts.	
4	I mean this is a place in my	
5	report where I talk about contract	
6	terms. I list them. But I do	
7	remember talking about contracts in	
8	other places.	
9	For example, I have cited	
LO	contracts for having different	
11	lengths of time. I have cited	
12	contracts for times where the	
L3	packers have the ability to buy the	
L4	option if the grower grossed more	
L5	than what is listed, they get to	
Lб	buy it, they have that option. I	
L7	have listed examples when contracts	
18	can be terminated early.	
L9	So there are several other	
20	places in my report where I cite to	
21	contracts besides this location.	
22	BY MR. REISER:	
23	Q It's not your opinion, is it,	
24	Dr. Mangum, that a packer that buys all of	
25	its hogs has exactly the same ability to	

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2	influence hog growing as one that does	
3	not, is it?	
4	A I think you said I think	
5	you want me to compare two things; a	
6	packer that buys all of its hogs versus	
7	one that does not.	
8	I mean, compared to a packer	
9	that buys 99 percent, 98 percent, and	
10	someone who buys a hundred percent, I	
11	might say I don't think there's a	
12	meaningful distinction. (I mean, the	
1 2	higger gemeniage would be gemeled to the	
13	bigger comparison would be somebody who	
14	buys all their hogs and somebody who grows	
14	buys all their hogs and somebody who grows	
14 15	buys all their hogs and somebody who grows all their own, right? obviously not	
14 15 16	buys all their hogs and somebody who grows all their own, right? obviously not identical.	
14 15 16	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited	
14 15 16 17 18	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited the Carleton and Perloff, depending on the	
14 15 16 17 18	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited the Carleton and Perloff, depending on the terms of contracts which put a lot of	
14 15 16 17 18 19	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited the Carleton and Perloff, depending on the terms of contracts which put a lot of requirements, they approximate they can	
14 15 16 17 18 19 20 21	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited the Carleton and Perloff, depending on the terms of contracts which put a lot of requirements, they approximate they can approximate this formal vertical	
14 15 16 17 18 19 20 21 22	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited the Carleton and Perloff, depending on the terms of contracts which put a lot of requirements, they approximate they can approximate this formal vertical integration.	
14 15 16 17 18 19 20 21 22 23	buys all their hogs and somebody who grows all their own, right? obviously not identical. But as I described and cited the Carleton and Perloff, depending on the terms of contracts which put a lot of requirements, they approximate they can approximate this formal vertical integration. Q Depending on the contractual	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
2	to show that I understood that
3	these are characteristics in the
4	marketplace, that may not be
5	that I know from personal
6	experience are not common across
7	all markets.
8	But for my purposes to
9	identify there are these contract
LO	terms, they occur, there are
11	various elements, what I found and
L2	highlighted met my needs for what I
13	was looking for the conclusions I
L4	was coming to.
15	BY MR. REISER:
L6	Q Are you familiar with the
L7	Packers and Stockyards Act, Dr. Mangum?
L8	A I know it exists. I have
L9	heard reference to it, but I don't know
20	much of the elements about it.
21	Q Did you know that it requires
22	the USDA to maintain a library or catalog
23	of each type of contract offered by
24	packers to swine producers for the
25	purchase of all or part of the producer's

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 1
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 2
      production of swine?
 3
                            Objection.
               MR. POUYA:
 4
         Foundation.
 5
               THE WITNESS:
                              Maybe.
                                       I can't
 6
         say for certain. Like I said, I am
 7
         not familiar with all the elements
         of that act.
 8
      BY MR. REISER:
 9
10
                   Did you know that there's a
11
      USDA swine contract library that details
12
      all of the terms that we are talking about
13
      here --
14
                (Simultaneous Crosstalk.)
15
               MR. POUYA:
                           Same objections.
16
               THE WITNESS:
                              It could be.
         But I have not relied on that
17
         existence in forming the opinions
18
19
         that I have rendered in my reports.
20
      BY MR. REISER:
21
                   And my question is, why did
22
      you rely on a selection of contracts as
23
      opposed to an inventory of all contracts?
24
               MR. POUYA:
                            Objection.
                                         Asked
25
         and answered.
```

1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	471
2	THE WITNESS: Well, these	
3	contracts that I found met my needs	
4	of finding examples of the	
5	contracts that are out there.	
6	I also know that it wasn't the	
7	only ones I found, that I was aware	
8	there were many like this from what	
9	I learned in discovery.	
10	As I said, I don't remember	
11	what I knew of in the past about	
12	this library or depository you	
13	mentioned. If it's only the type	
14	of contracts that are listed, I	
15	think having actual contracts, I	
16	would look for those first just	
17	myself, as opposed to looking for	
18	templates of types of things. But	
19	I don't remember specifically what	
20	is in the library.	
21	BY MR. REISER:	
22	Q Well, the library contains	
23	all the terms. I can show it to you, but	
24	that would be a waste of time because you	
25	haven't reviewed it and you will be	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	instructed not to talk about it.	
3	Let me ask you this,	
4	Dr. Mangum: If you wanted to know how	
5	common the terms that you're describing in	
6	paragraph 111 are, why wouldn't you look	
7	at a repository that collects and outlines	
8	in very painstaking details all of those	
9	terms?	
10	A You know, I can't comment. I	
11	don't know what is in this depository	
12	you're talking about. And I don't know	
13	that having something there would have	
14	given me any more substantiation for the	
15	conclusions I came to.	
16	Q You don't know one way or the	
17	other, right?	
18	A Nothing you have mentioned	
19	today leads me to think that I should have	
20	done something else compared to what I did	
21	to rely on for my opinions.	
22	Q Let's pull up paragraph 147	
23	actually, we can just take down the	
24	report. No need to do that.	
25	One of your opinions,	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
2	Foundation.
3	(Whereupon a Discussion is
4	Held Off the Record.)
5	THE WITNESS: Well, the pork
6	market, which is US products only
7	that I looked at, is not a function
8	of what is exported. It's a
9	function of what remains
10	domestically in a marketplace.
11	I have looked at in my model,
12	the pricing model, I have included
13	factors that supply and demand side
14	factors, that include the price of
15	domestic pork. That's what I have
16	included.
17	So I don't look at exports of
18	things that would affect markets
19	for exports. I look at what is
20	going on domestically.
21	BY MR. REISER:
22	Q You did nothing in your
23	models to distinguish between defendants
24	who purchase nearly all of their hogs from
25	growers on the one hand from those who do

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	not on the other hand, right?	
3	MR. POUYA: Same objection.	
4	Vague. Foundation. Incomplete	
5	hypothetical.	
6	THE WITNESS:	
7	asking if there is a variable that	
8	somehow measures degree of vertical	
9	integration. And no, I did not	
10	include it. I don't see as	
11	relevant a vertical integration	
12	variable in my pork market pricing	
13	model.	
14	BY MR. REISER:	
15	Q Your model evaluates impact	
16	in damages over the 2009 to 2018	
17	timeframe, right?	
18	A Well, the period of my	
19	conspiracy indicator variable, right?	
20	that's what I call the class period in my	
21	report. That does go from January 2009 to	
22	the end of June 2018.	
23	Q And you arrived at a single	
24	overcharge percentage for each pork	
25	product in the plaintiffs' class	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	definition over the course of that roughly	
3	nine-year timeframe, right?	
4	A Not exactly. But it's each	
5	of I think it was six or eight, I have	
6	to count, distinctive counts. Not each	
7	product. But, for example, loin, ham,	
8	right? shoulder, belly pork, et cetera.	
9	Q One number for the entire	
LO	2009 to 2018 timeframe, right?	
11	A Correct.	
L2	Q We talked earlier about the	
L3	plaintiffs being limited by statute to	
L4	damages after June 29, 2014.	
15	Do you remember that	
L6	discussion?	
L7	A I do.	
18	Q Doesn't the way you have	
L9	modeled the damages hold defendants	
20	accountable for damages that they are by	
21	statute from recovering?	
22	A No, not at all. I mean,	
23	damages are a function of applying only a	
24	certain time period. So in my opinion,	
25	the proper method is to come up with an	

1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	494
2	single conspiracy over the time	
3	period. That's what my model could	
4	answer. But I haven't done an	
5	analysis that would enable me to	
6	answer the question that you have	
7	posed for the opinions that I have	
8	formed.	
9	BY MR. REISER:	
10		
	Q You don't need to do any	
11	analysis because it's just math, right?	
12	If there is an overcharge on	
13	bacon of 80 percent prior to June 29,	
14	2014, and there's no overcharge after that	
15	period, your math comes up with zero,	
16	isn't it fair to say that your model would	
17	say there was an overcharge even though	
18	there was a zero percent overcharge after	
19	June 29, 2014?	
20	A Well, you have proposed	
21	something that I don't know there's any	
22	economical theory to back up it.	
23	You can say, let's assume	
24	Apple pays people to use their phones in	
25	one year and then doubles their price the	

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1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	
2	next year, wouldn't that mean XYZ. I	
3	wouldn't answer that question.	
4	I would say, can you give me	
5	some fleeting chance of economic reality	
6	that would suggest that.	
7	What I have done is I have	
8	answered a question that I think would be	
9	the question at hand, if somebody says,	
10	hey, liability's just been found for this	
11	conspiracy over this period, we need an	
12	answer for the effect of the conspiracy.	
13	So I have answered that question.	
14	I have not looked at	
15	something given what you have proposed in	
16	the opinions in this case, I don't know a	
17	reason why that would be logical or that	
18	would be the outcome.	
19	Q Do you agree 80 is more than	
20	zero?	
21	A I do agree that 80 is a	
22	higher number than zero.	
23	Q You chose 2005 to 2009 as a	
24	benchmark period, right?	
25	A Not really. I would have	

1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL	,,
2	I would have gone further back. But I	
3	I did choose to go as far as I could with	
4	the data that I have. But I didn't start	
5	off by saying, I don't want anymore data.	
6	I used what I was told was agreed upon	
7	between the parties to be produced and I	
8	used all I could.	
9	Q So having more data would	
10	have been better for you for purpose of	
11	doing your analysis?	
12	A I would be interested if	
13	someone has any more information on any	
14	topic that I have opined on. I believe I	
15	had sufficient data to run the model that	
16	I did over many, many years more than a	
17	decade.	
18	But as far as I didn't choose	
19	to not go back further than 2005, I used	
20	all that I could.	
21	Q Do you agree if certain	
22	events during the benchmarking period led	
23	to lower pricing during that period, that	
24	your model would predict higher damages?	
25	MR. POUYA: Objection.	

1	DR. RUSSELL MANGUM - HIGHLY CONFIDENTIAL
2	Foundation. Calls for speculation.
3	THE WITNESS: I disagree. I
4	believe I have the variables which
5	identify that identify relevant
6	factors that affect price over the
7	entire time period. And the way my
8	benchmark model was created was it
9	asks, after I include those
LO	variables, right? is there still
11	something hanging on that also
12	explains a different price during
13	the conspiracy.
L4	So I believe I have used the
15	right set of variables. I am
L6	not I don't agree. I think if
L7	you said I think you are
18	suggesting if there was some other
L9	variable that was relevant, if I
20	used it. Well, I need to know what
21	that is to see if it makes logical
22	sense, if it applies to the theory
23	in the case. But I have included
24	all I am aware of that would be
25	relevant.